

Amdt. Dated September 2, 2004
Reply to Final Office Action of June 4, 2004

REMARKS

Favorable reconsideration and allowance of the present application in view of the foregoing amendments and the following remarks are respectfully requested.

Claims 70-99 remain in the present application, including independent claims 70, 88, and 93. Claims 70, 82, 88, and 93 have been amended in this paper, while claims 81 and 83 have been cancelled. Independent claim 70, for instance, is directed to a method for forming a tissue product. The method comprises forming a paper web from a cellulosic fibrous material and a particulate superabsorbent material. The superabsorbent material of claim 70 comprises from about 0.1% to 3% by weight of the paper web and has a total swelling capacity of at least about 20 grams of an aqueous solution per gram of superabsorbent material. The paper web is at least partially dried. The resulting tissue product is formed primarily from the paper web and optionally one or more additional paper webs, and the resulting tissue product has a basis weight less than about 100 grams per square meter.

In the Final Office Action, independent claims 70 and 88 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,986,882 to Mackey, et al. Mackey, et al. is directed to a continuous wet-laying papermaking process for the manufacture of absorbent paper sheets from two or more fibrous pulps. At least one of the fibrous pulps, Pulp A, is a polymer-modified fibrous pulp, which, in its alkali-metal-cation exchanged state, imbibes water by hydrocolloidal swelling. The balance of the fibrous pulp, Pulp B, comprises conventional papermaking pulps. Mackey, et al. specifically describes its "Pulp A" as comprising a covalently chemically bonded polymeric modifier consisting of a hydrophilic organic polycarboxylate polymer. (Col. 5, line 63 – col. 6, line 4). Although Mackey, et al. states that Pulp A is a potentially highly absorbent material (col. 8, lines 14-15), the disclosure states that Pulp A is "more narrowly defined" than materials typically characterized as "super-absorbents" because Pulp A consists essentially of a polymer-modified fibrous pulp having two distinct states: a protonated state, and an alkali-metal-cation exchanged state. (Col. 15, line 53 – col. 16, line 36).

With regard to the methods of forming a tissue product in claims 70 and 88, Mackey, et al. does not disclose or suggest the step of forming a paper web from a

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cellulosic fibrous material and a particulate superabsorbent material. Such a "particulate" superabsorbent material is described in Applicants' specification, for example, at page 3, lines 4-6 and at page 8, lines 19-23. Using a "particulate" superabsorbent material in the methods and tissue products of Applicants' claimed invention may lead to tissue products having increased bulk, permeability, and void volume. (See, e.g., Appl. p. 3, lines 22-26; p. 11, line 29 – p. 12, line 3; p. 13, line 23 – p. 14, line 29).

In contrast to Applicants' claimed "particulate" superabsorbent material, Mackey, et al. only describes a fibrous absorbent material, Pulp A, which consists essentially of a polymer-modified fibrous pulp having a protonated state and an alkali-metal-cation exchanged state. Applicants respectfully submit, then, that for at least this reason, independent claims 70 and 88 patentably define over Mackey, et al.

Apart from the above, Mackey, et al. also fails to teach other aspects of independent claim 88. For example, claim 88 is directed to a method for forming a tissue product that contains a particulate superabsorbent material that is pre-swollen prior to formation of the paper web. Pre-swelling the superabsorbent material in the context of the present claims may provide a variety of benefits to the resulting tissue product. For instance, when applying the superabsorbent material to certain stages of a papermaking process, such as to the headbox, pre-swelling may ensure that the superabsorbent material has sufficient time to adequately swell during the process. (Appl. pp. 10-11). The extent of pre-swelling may vary depending on a variety of factors, such as the time in which the superabsorbent material is allowed to remain in the solution, the type of superabsorbent material, the amount of superabsorbent material, the stage of the process in which the material is applied, the desired amount of tissue absorbency, and so forth. (Appl. p. 11, lines 2-18). Thus, for at least these additional reasons, Applicants respectfully submit that independent claim 88 patentably defines over Mackey, et al. because Mackey, et al. fails to disclose a superabsorbent material that is pre-swollen.

Independent claim 93 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Mackey, et al., in view of U.S. Patent No. 5,175,046 to Nguyen. Nguyen is directed to a laminated structure in which a superabsorbent material is

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provided as a layer of discrete, discontinuous chunks or elements attached to a continuous porous support layer. Nguyen describes these superabsorbent elements as porous structures that comprise (1) a substrate material and (2) a superabsorbent polymer. For instance, in Example 1, Nguyen describes making its superabsorbent elements by: (1) providing a pulp web as the "substrate material"; (2) treating the substrate material with a chemical solution and irradiating it to make a superabsorbent-coated pulp web substrate where the superabsorbent add-on level is 400%; (3) swelling this superabsorbent-coated substrate; (4) drying it; and (5) dicing the superabsorbent-coated web substrate into pieces or elements. The superabsorbent elements are placed between two pulp support webs to form the laminate. (Col. 4).

Applicants respectfully submit that claim 93 patentably defines over the combination of Mackey, et al. and Nguyen. As discussed above, Mackey, et al. fails to disclose an absorbent tissue product wherein at least one paper web of the tissue product comprises a *pre-swollen, particulate* superabsorbent material. And Nguyen fails to remedy these deficiencies in the disclosure of Mackey, et al. Rather than disclosing a paper web comprising from about 0.1% to about 5% by weight of a pre-swollen particulate superabsorbent material, Nguyen describes a specific superabsorbent-coated web substrate that is formed, diced, and placed between two pulp support webs. In short, any combination of Mackey, et al. and Nguyen does not disclose an absorbent tissue product wherein at least one paper web of the tissue product comprises a cellulosic fibrous material and from about 0.1% to about 5% by weight of a pre-swollen particulate superabsorbent material, wherein the tissue product has a basis weight less than about 100 grams per square meter. Thus, Applicants respectfully submit that claim 93 patentably defines of the cited references.

Various dependent claims were also rejected under either 35 U.S.C. § 102(b) or § 103(a) as being unpatentable over Mackey, et al. alone or in combination with Nguyen. Applicants respectfully submit that the dependent claims patentably define over the cited references for at least for the reasons set forth above relating to independent claims 70, 88, and 93. However, Applicants also note that the patentability of the dependent claims does not necessarily hinge on the patentability of independent claims 70, 88, and 93. In particular, it is believed that some or all of these dependent

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claims may possess features that are independently patentable, regardless of the patentability of claims 70, 88, and 93.

In summary, Applicants respectfully submit that the present claims patentably define over all of the prior art of record for at least the reasons set forth above. As such, it is believed that the present application is in complete condition for allowance and favorable action, therefore, is respectfully requested. Should any issues remain after consideration of this Amendment, Examiner Halpern is invited and encouraged to telephone the undersigned at his convenience.

Please charge any additional fees required by this Amendment to Deposit Account No. 04-1403.

Respectfully submitted,

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